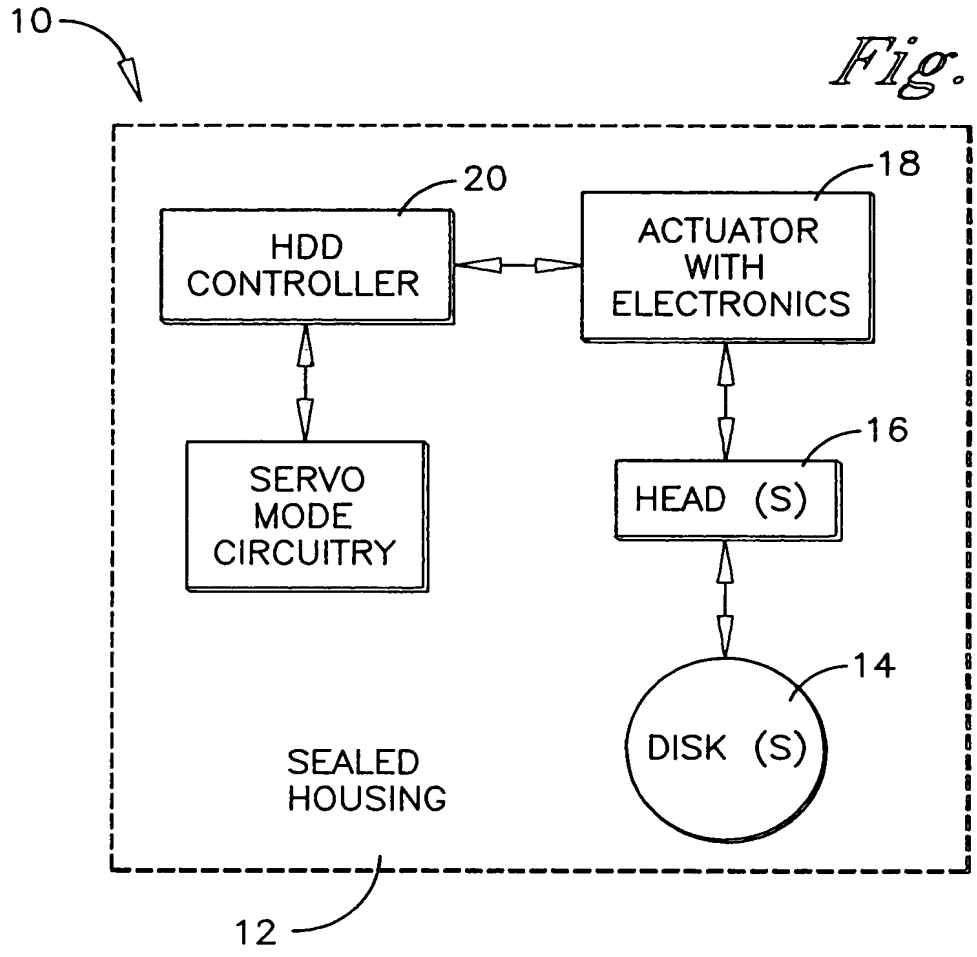
10
20
18
HDD CONTROLLER
ACTUATOR WITH ELECTRONICS
SERVO MODE CIRCUITRY
16
HEAD (S)
14
DISK (S)
SEALED HOUSING
12

Fig. 1

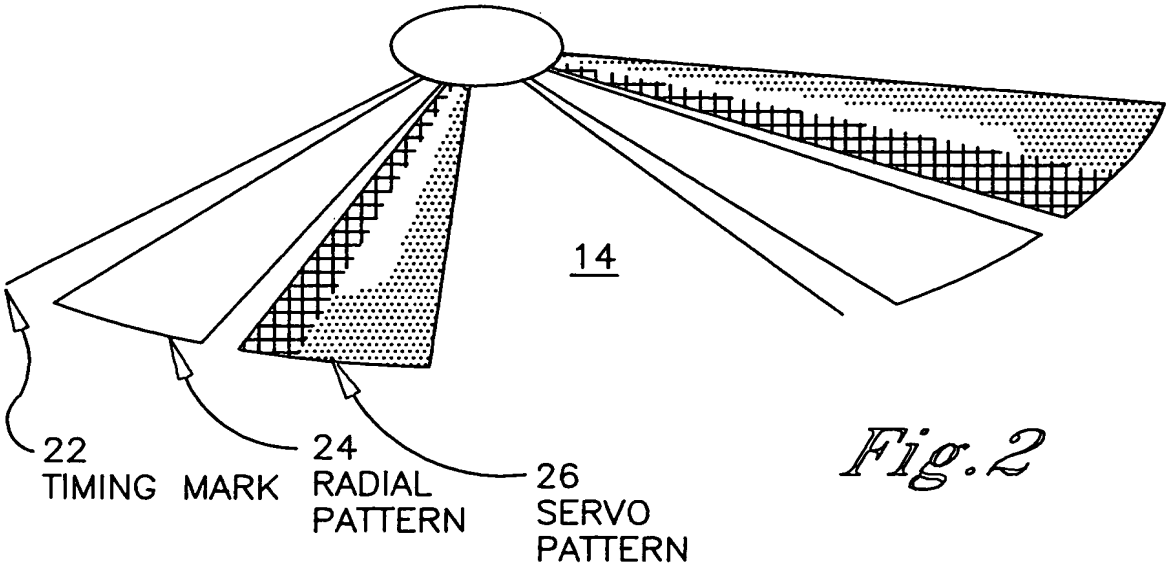
14
22
TIMING MARK
24
RADIAL PATTERN
26
SERVO PATTERN

Fig. 2

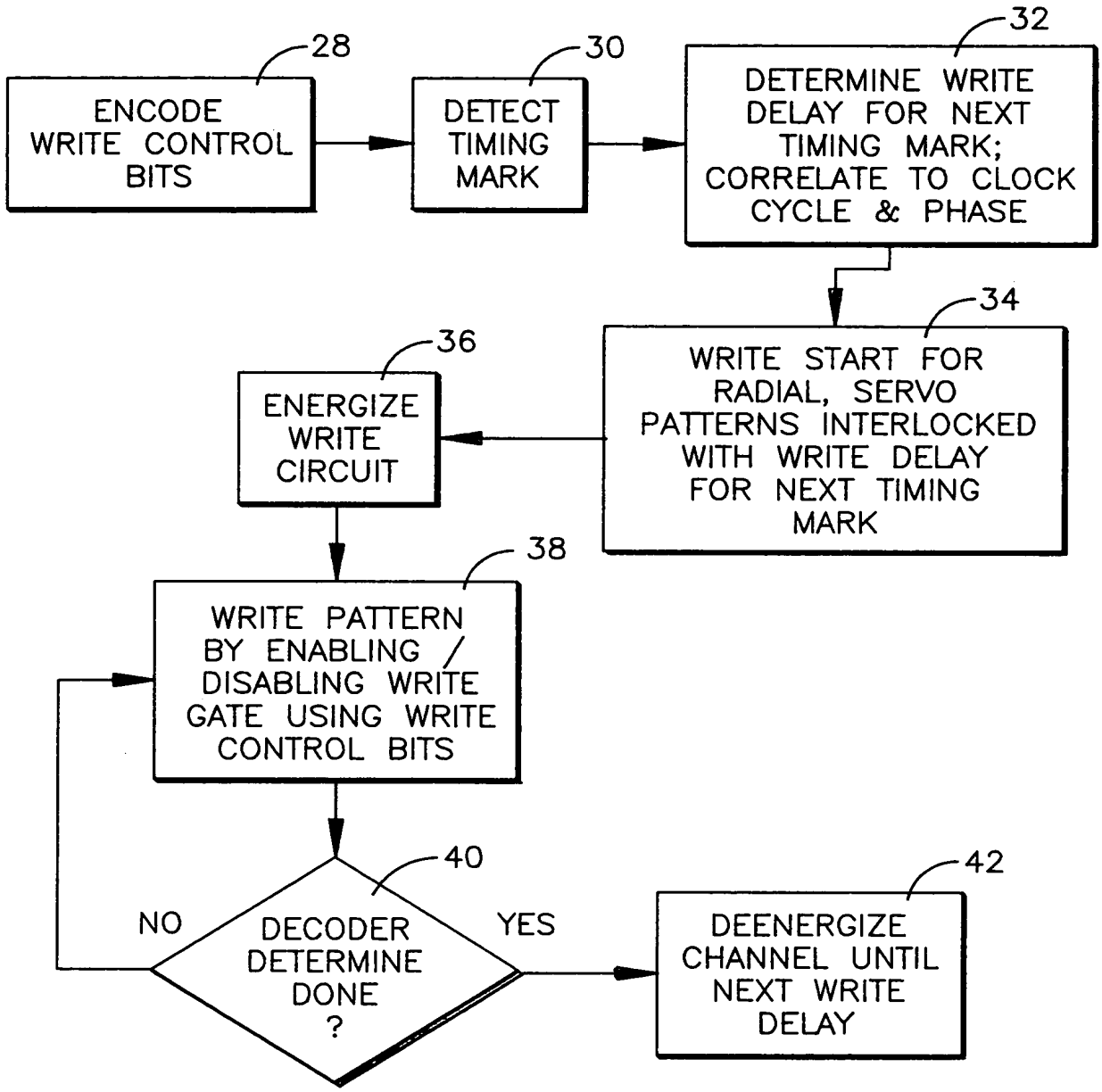
28
ENCODE WRITE CONTROL BITS
30
DETECT TIMING MARK
32
DETERMINE WRITE DELAY FOR NEXT TIMING MARK; CORRELATE TO CLOCK CYCLE & PHASE
34
WRITE START FOR RADIAL, SERVO PATTERNS INTERLOCKED WITH WRITE DELAY FOR NEXT TIMING MARK
36
ENERGIZE WRITE CIRCUIT
38
WRITE PATTERN BY ENABLING / DISABLING WRITE GATE USING WRITE CONTROL BITS
40
DECODER DETERMINE DONE ?
NO
YES
42
DEENERGIZE CHANNEL UNTIL NEXT WRITE DELAY

Fig. 3
LOGIC

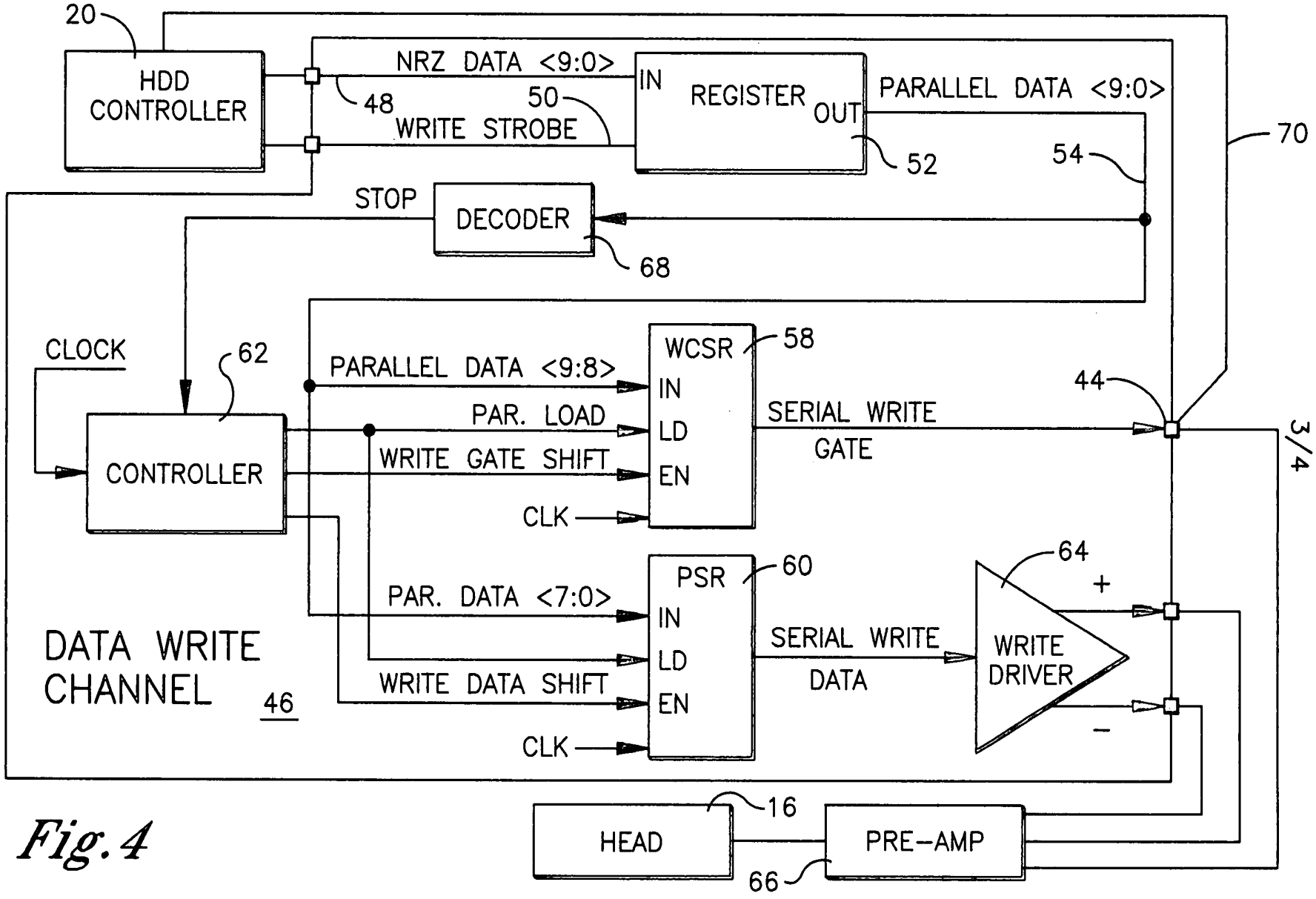
20
HDD CONTROLLER
NRZ DATA <9:0>
48
50
WRITE STROBE
IN
REGISTER
OUT
PARALLEL DATA <9:0>
52
54
70
STOP
DECODER
68
CLOCK
62
CONTROLLER
PARALLEL DATA <9:8>
PAR. LOAD
WRITE GATE SHIFT
CLK
WCSR
58
IN
LD
EN
SERIAL WRITE GATE
44
PAR. DATA <7:0>
PSR
60
IN
LD
EN
WRITE DATA SHIFT
CLK
SERIAL WRITE DATA
64
+
WRITE DRIVER
−
DATA WRITE CHANNEL
46
HEAD
16
66
PRE-AMP
3/4

Fig. 4

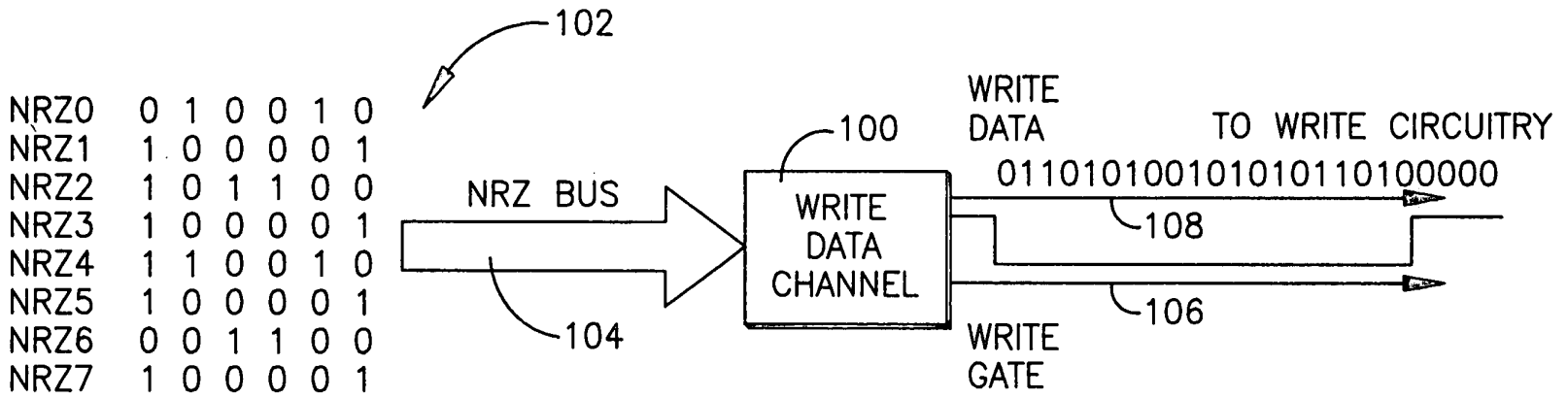

Fig. 5 ALTERNATE ENCODING